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## WRITING ACROSS THE CURRICULUM EFFORTS AT NORTHERN ARIZONA UNIVERSITY'S SCHOOL OF FORESTRY

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**ABSTRACT:** The objective of Writing across the Curriculum (WAC) in the School of Forestry is to build critical thinking and writing skills throughout the duration of a student's program. The program, as it has evolved over the last four years, has resulted in more writing assignments in classes where previously little had been required, a movement from descriptive to analytical writing by the students, and finally, a demonstrable improvement in student writing abilities. Success has been due primarily to four key features: (1) a revision of the Forestry Professional Program prerequisites, (2) revising the Forestry curriculum both to increase the amount of writing required as well as a logical progression in the types of assignments, (3) faculty development seminars and assistance provided by the English Department's Composition program, including tutoring students and providing them workshops, and (4) an assessment of faculty and student attitudes towards writing.

Student and faculty attitudes towards writing and opinions about effective strategies to improve writing were assessed through the use of surveys. The results showed that while there was broad support for writing among faculty and students, the amount of writing assigned was fairly minimal (particularly in the lower-division courses), and that while students, on average, felt their writing was successful, faculty thought that it was not. The two strategies that were considered most effective were student revision after faculty comment and peer revision among students. Because evaluating and grading was viewed by the faculty as the primary factor limiting their assignment of writing, a standardized grading score sheet ("rubric") was developed.

The net result of the writing across the curriculum program in the School of Forestry is that faculty are assigning more writing, providing opportunities for revision after their comments, and standardizing evaluation and grading criteria. Our strongest partner in this effort has been the English Department and its Composition program in particular. The results of our collaboration have demonstrated—albeit not statistically significant—an improvement in our students' writing abilities.

### INTRODUCTION

Writing is rated by employers, faculty, and even students, as one of the most important skills needed for effective natural resource managers. In the Fall of 1993 it became apparent that many of our students were ill-prepared after completing the professional program. At the same time faculty began to recognize that students' writing abilities were hampering our teaching capabilities. Experience with Writing Across the Curriculum (WAC) over the last thirty years has shown that students learn to write best when writing is (1) introduced as part of the academic discipline, and (2) used as an essential learning tool (Spagna, 1997).

The objective of Writing across the Curriculum in the School of Forestry is to build critical thinking and writing skills throughout the duration of a student's program. The program, as it has evolved over the last four years, has resulted in more

writing assignments in classes and a demonstrable improvement in student writing abilities. The success of the WAC program is due primarily to the dedication of the faculty, but four key features supplied the support which enabled the faculty to be successful. These are: (1) a revision of the Forestry Professional Program prerequisites, (2) revising the Forestry curriculum both to increase the amount of writing required as well as a logical progression in the types of assignments, (3) faculty development seminars and assistance provided by the English Department's Composition Program, including tutoring students and providing them workshops, and (4) an assessment of faculty and student attitudes towards writing. The way in which these four components acted to support faculty efforts to improve writing will be discussed after the professional forestry program is described.

## WRITING IN THE FORESTRY PROFESSIONAL PROGRAM

The School of Forestry at Northern Arizona University offers a three semester, upper division program that leads to a professional degree (B.S.F.) in Forestry (see Figure 1). The professional program is preceded by a set of prerequisite courses, of which only three (9 credits) are lower division Forestry courses. Two composition courses (6 credits total) are included as prerequisites, one at the freshman level and one at the sophomore. Forestry 101, which is now taught in both the fall and spring semesters, does not presently emphasize writing for two reasons: (1) sections are large, up to 120 students; and (2) there is no guarantee—particularly in the fall semester—that students have had any college-level composition courses (see Figure 1). Because of the size of the section, writing is limited to one paragraph (at most); and while identification of students with writing problems is possible, there is not a high priority in encouraging them to seek assistance. While the number of students in Forestry 211 (Forest Measurements) is also high, generally around 60 - 70, they are required to prepare a two to three page laboratory report every week. This report is reviewed both by the faculty member (for technical merit) and by a Forestry graduate assistant (for composition). The assignment must be re-written until the writing portion attains an 80% grade. Students with severe writing handicaps are encouraged to seek assistance from either Forestry's writing tutor or the University's Writing Assistance Center. One short paper is required in Forestry 212 (Silvics).

Most instruction in the Forestry Professional Program occurs in three semesters of integrated classwork, beginning in the fall of a student's junior year and concluding in the fall of their senior year. Each semester is essentially a 16 credit course, divided into modules (concurrent in the first two semesters and sequential in the third) usually taught by more than one professor. Semester A focuses on the ecological and physical aspects of forestry; Semester B on management science, forest planning, and policy; while Semester C is a capstone project.

Semester A typically contains from 25 to 40 students (including some graduate students taking it to fulfill prerequisites). Writing assignments in Semester A vary among the faculty members who teach there. Approximately half the modules within the semester require writing. Typically, when writing is assigned, students are expected to prepare their papers in standard scientific form (i.e., introduction, objectives, methods, results and discussion). Generally, 25 to 30 students move on to take Semester B, where writing intensity dramatically increases. Presently, there are four concurrent tracks (somewhat similar to individual courses) during the semester. One track (focusing on history, policy and recreation) has been designed to emphasize writing, and because students are required to obtain at least a C in all four tracks to progress to

Semester C, the writing-intensive track ideally provides an incentive for students to improve their writing during Semester B. Unfortunately, every year two or so students decide the effort is not worthwhile and change their majors, which is not an optimal resolution to writing problems. The sequence of writing assignments in Semester B starts with one to two paragraphs in the first week (used as an assessment tool), progresses to two page essays by mid-semester, and requires two five page reports at the end of the semester. Re-writing is used to overcome the student perceptions that writing is a one-shot task.

The prerequisite courses, and the initial two semesters of the professional program, are intended to prepare students for the profession by having them write a management plan—similar to what they would do as foresters—in Semester C. The plan is a comprehensive document that is set up to guide the management of specific land areas. It includes an introduction, description of the area, results of the resource inventories, and analysis of various management scenarios. Students prepare an individual plan, aside from the inventory and the initial three chapters which are done in groups of four. Past history has shown that, because of time constraints, very little editing and re-writing is done by students prior to submitting their plans; unfortunately, it is not uncommon for students to merely "data-dump" rather than thoroughly analyze the project.

Faculty demands in Semester C to wade through masses of poorly written—and often poorly analyzed—management reports (25 students times 100+ pages times each report evaluated by a minimum of two faculty members) caused widespread despair at the end of every fall semester. At the same time, the limitations of the traditional curriculum were being challenged by some faculty. This resulted in two curriculum changes, the first involving a switch in the English composition prerequisites, and the second being a thorough revision of the Semester A and B curriculum, with writing being one crucial criterion.

## COMPOSITION PREREQUISITES

The Forestry faculty's initial reaction after recognizing that student writing abilities were inadequate was to blame the English Department since, after all, we required 9 credits (three courses) of English courses prior to entry into the professional program. If students came to us unprepared in their Junior year after they had taken these courses, then the problem must lie with those courses. With this in mind, the Forestry curriculum committee decided to revisit our writing prerequisites to ensure that they met our needs. What we discovered was not quite so simple; nor were we free of blame! The problem was actually two-fold. First, we discovered by examining transcripts that many students had not taken the required prerequisites, yet had been admitted into the Forestry Professional Program. But in some cases, the writing prerequisites were not taken by a student until after they had completed the three semester program, were never taken, or advisors were

allowing inappropriate courses to be substituted. This problem—which has largely been overcome—was resolved by informing both students and their advisors that the composition requirements would be strictly enforced as well as revising the advising form to more clearly indicate which courses could be substituted.

The second concern was whether the prerequisite composition courses were, in fact, meeting our needs. To determine this, we obtained and examined the syllabi for the then prerequisite courses, English 101 and English 102 (a two semester freshman composition series, 3 credits each), and English 302 (technical writing, 3 credits). What we found when we evaluated the Technical Writing course was that not much writing was required, and that the type of writing (cover letters and resumes) was not adequate for our needs, nor did the writing strategies used (plenty of headings and lots of white space) teach the types of analytical techniques that we felt were needed. The net result, in our opinion, was that students were misled (no one received less than a B in this course) into believing that they were adequately prepared to write technical papers.

We were fortunate that the Composition program had recently developed two new courses, English 105 (Critical Reading and Writing, 4 credits) and English 205 (Writer's Workshop, 2 credits). When we examined their syllabi, and after discussions with Dr. Geoff Chase, then head of the Composition program, the curriculum committee decided to adopt English 105 and English 205 as prerequisites. The rationale for this decision was that the amount of writing, its intensity, and the skills required to succeed in these classes would better prepare students for entry into the Forestry professional program.

Unfortunately, there is not a semester-by-semester correlation between the English prerequisites and lower division Forestry courses, at least until Forestry 211 when we are assured that students will have had, or be concurrently registered in, English 105 (see Figure 1). By the beginning of Forestry 212 we know that students will have completed English 105, and have finished or be concurrently registered in English 205. And before gaining admission to the professional program, in Semester A, students are required to have completed of their writing prerequisites.

### FORESTRY CURRICULUM REVISION

The discussions with the English faculty about writing led to an increased awareness of the concepts behind Writing Across the Curriculum that were stated in the introduction: that writing—and the teaching of writing—has to be an integral part of the discipline, and that the process of writing could—and should—be an essential learning tool. Until recently, most writing intensive assignments did not occur until at least the second semester of the junior year. With the new composition prerequisites, and a heightened sensitivity by the faculty, in-

tensive writing is now being required in the first semester of the sophomore year. Our curriculum does not yet fully and perfectly structure these assignments, too often they begin afresh with each course and semester. But linkages across Forestry courses, and between the English prerequisites and Forestry courses can be developed.

The large class sizes in the existing structure of Forestry 101 (Introduction to Forestry) create a multitude of problems: the classes are impersonal, assignments and exams must be simplified due to grading difficulties, and as a result building skills during the crucial freshman year is difficult. Of primary concern to the Forestry faculty is the problem that many students fail to continue with the program (of the approximately 200 students taking the course each year, only about 75 take the next course in the sequence). In an effort to address these problems, proposals to separate the course into smaller sections of about 25 students have been advanced. These smaller sections would allow more writing, the ability to link assignments with the composition courses, and hopefully attract and retain more students.

The challenge to maintain and increase the writing required in Forestry 211 and 212 is also related to the size of the classes and the inconsistency in the composition courses that a student might have taken. Students in Forestry 211 can be expected to at a minimum be registered for English 105. Therefore, students can be expected to either have, or be developing, the skills necessary to respond to the laboratory report assignments. In addition, the requirement that students get at least 80% of the points assigned to writing in the laboratory reports means that they have an incentive to improve their writing. This is consistent with reports from the writing tutor that she is receiving requests for assistance from these students. Forestry 212 is problematic because sophomore standing is not required to register. It is conceivable that students have had no composition courses if they take Forestry 212 the second semester of their freshman year; and because English 105 is not available to first semester freshman, co-registration with this composition course and Forestry 212 is the best that can be expected. For sophomores, it is possible that they have taken English 105, and possibly even English 205 when they take this course.

Semester A continues the writing process and style from Forestry 211 by focusing on preparation of laboratory reports. However, in contrast to Forestry 211, the faculty expectations in Semester A are that the reports will be more focused, specifically linking the objectives of the laboratory to the methods used for the analysis, then clearly differentiating between the results and the discussions and conclusions that can be inferred from the results. Thus, the level of sophistication in the laboratory reports grows (as size is enlarged from two pages), while analysis rather than description is emphasized.

Semester B faculty have made a concerted effort to both increase the amount of writing, as well as to build skills through-

out the semester. Journals are used in one module as a way to develop ideas and arguments for student papers (and as a replacement for quizzes) (Bean, 1996). In-class writing exercises, combined with peer discussion of writing, has been used to provide immediate feedback to students. For longer papers, students are generally allowed to improve their grades if they revise their original submittals after receiving comments from faculty.

In Semester C the major curricular change has been to increase the amount of revision that students are expected to include in their management plans. Traditionally, all chapters of the management plans were individually prepared. This last year, the first four chapter (problem formulation, area description, inventory methods, and analysis procedures) were written by groups of three students. Groups were given the opportunity for revision for the first three of these chapters, with substantial improvements noted from those groups who took advantage of this. Students self-selected themselves into groups for the implementation portion of the management plans. In this case, peer comment and revision was used between pairs of groups. While the overall quality of the plans still suffered from their traditional deficiencies, the parts where revision was incorporated were noticeably better.

#### FACULTY DEVELOPMENT

Ultimately, the writing knowledge and skills that students bring into our courses is bounded by the Forestry faculty's ability continue building both conceptual and technical skills. Faculty incorporation of writing has been shown to be affected by perceived difficulties in, preparing assignments, assessing the quality of student responses, and the sheer demands that grading places on the instructor in large classes. We found that one good way to support faculty is to build bridges with university's English Department. Our collaboration with the English Department started when we were reviewing our prerequisites, and blossomed into a full-fledged partnership. Three principal components characterize this partnership.

First, the School of Forestry funds an English Department graduate assistant. Over the last three years, four different graduate assistants have provided writing workshops and tutoring for Forestry students (this is a coveted assignment for these students, both because we traditionally provide an office, but also because the graduate assistants recognize its value for their future job prospects). The tutors (or "coaches" as we call them) are available to assist or review faculty writing assignments. Through consultation with the professors, they advise students and have provided faculty members with grading assistance. The workshops provided to students are sequenced to build the writing skills needed for Forestry 211 (fall) and Semester B (spring). The availability of the writing workshops compensates for differences in incoming student writing skills, and allows faculty to focus on development of concepts rather than the mechanics of writing.

The second area of collaboration involved the English Department providing three "brown bag" lunch seminars designed to meet Forestry faculty needs. These seminars were variously given by the Chair of the English Department, the Head of the University Writing Center, and/or the coordinator for Writing Across the Curriculum in the Forestry School. The first seminar discussed how students respond to writing assignments, the second on how to effectively evaluate and grade writing assignments, while the third how to prepare effective writing assignments. The knowledge gained by the Forestry faculty from these seminars has been widely applied in their classes.

The third area of collaboration between the Forestry School and the English Department involved an assessment of student and faculty opinions about writing, the efficacy of our course prerequisites, and development of grading scorecards ("rubrics"). These tasks were undertaken through a one-year appointment of a Writing Across the Curriculum coordinator (a previous writing coach), who worked with a Linguistics professor and another English graduate student. Opinions about writing were developed through a survey of both students and professors (Spagna, 1997) (the results of these surveys are discussed in the next section). An assessment of the efficacy of the composition prerequisites was done by comparing student scores on a writing assignment with the grades the student received in any composition courses and the student's ACT/SAT scores (also reported in the next section). The grading rubric for writing assignments was developed as a way to ensure consistency and ease the grading burden for evaluating writing (Shearin et al., 1997). A copy of the rubric is provided in Appendix A.

#### WRITING ASSESSMENTS

Student and faculty attitudes towards writing have been shown to have a significant effect on the success of writing across the curriculum programs (Spagna, 1997 citing Anson, 1988, Charney, 1995, Daly, 1985, Pajares and Johnson, 1994). Positive attitudes towards writing are reflected both in a willingness on the part of faculty to incorporate writing into their classes, as well as a willingness on the part of students to respond to these assignments. But we were also concerned about whether a student's previous experience, both in high school and in pre-requisite classes, also affected their writing ability. A two-part writing assessment project was conducted in an attempt to first determine student and faculty attitudes towards writing, and secondly, to determine whether a student's performance on writing assignments could be predicted based on prior coursework and scores on standardized tests (Spagna, 1997).

##### Survey of Student and Faculty Attitudes Towards Writing

The first assessment to determine faculty and student attitudes towards writing was done through written surveys (Spagna,

1997). Eighteen faculty members and 23 Forestry seniors provided the sample for this analysis. Faculty and students were asked to respond to twenty-four questions related to their attitude towards writing which were taken directly from statements made during interviews. A total attitudinal score for each respondent was constructed from an individual's response to these questions (Spagna, 1997). A second set of four questions were asked of both faculty and students about the usefulness of different types of assignments, effective strategies to respond to assignments, and how well students performed in nine different phases of the writing process. Finally, faculty were asked a third set of three additional questions about how frequently they assigned different types of writing in lower-division and upper division courses, and what factors limited the amount of writing that they assigned.

The responses to Spagna's (1997) attitudinal scale questions show that both faculty and students have positive attitudes towards writing, although the faculties' (3.24 out of 4) is higher than the students' (2.85 out of 4).<sup>2</sup> There is no real divergence between faculty and students opinions that writing is an essential part of a good college education, although faculty are more strongly of the opinion that foresters need to write well. Both groups strongly agree that learning to write well is a life-long process, and both groups feel that writing will be an important part of forestry graduates' futures. Where students and faculty diverge in their attitudes about writing is when it comes to its effectiveness as a learning tool. Faculty are much more likely than students to think that writing helps students grasp concepts. Faculty perceive that writing was a more effective way to determine whether students had benefited from reading compared to quizzes over the same material.

Spagna's (1997) analysis of the usefulness and success of different types of writing and writing strategies highlighted similarities and differences in opinions between students and faculty. Faculty think their writing assignments are not terribly successful in improving basic writing skills or in encouraging critical thinking. They do, however, think they are successful in modeling professional tasks and reviewing material from class. Of the five strategies employed by faculty to help students with their writing (peer review of drafts, revision after instructor comments, Writing Coach consultations, University Writing Center consultations, and student self-evaluation), revision after comment and Writing Coach consultations are most commonly used. Faculty think that the revision process is most useful, and do not think much of student self-evaluations. Students generally rely on revisions after faculty comment and peer review of drafts as their preferred mechanisms. Students occasionally go to the Writing Coach, but hardly ever to the University Writing Center. By far the most successful strategy, from the students' perspective, is responding to faculty comments, and secondarily, peer review.

Responses to Spagna's (1997) survey show significant differences between student and faculty perceptions of student per-

formance on nine different stages of writing. Table 1 provides the comparison for these stages. In general, faculty believe that students performed poorly (less than 2.5 on the 4 point scale) on seven of nine writing stages. The only areas where faculty think that students perform successfully or better are in understanding assignments and addressing the appropriate audience. In all categories, in comparison to the faculty, students feel that their performance is successful, sometimes by an average of one point on a four-point scale (i.e. from an average of poor to an average rating of successful). The difference between mean ratings is greatest in the areas of support concepts with information, using clear and concise language, and correctly using and documenting quotations.

Spagna (1997) found that faculty considered writing assignments to serve three very important purposes: they model writing tasks used in the profession, they help to improve students' basic skills, and they encourage critical thinking. But faculty attitudes towards writing are not reflected in their assignments. Spagna's survey shows that very few writing assignments occur in lower division courses, and when they do, they are primarily short-answer essay exam questions. Three out of four lower division Forestry courses assign laboratory reports, two assign personal narratives, and analytical papers are assigned in one course, but only once a semester. No lower division courses assign literature reviews or research papers. As discussed previously, writing intensifies in the upper division Forestry courses. The frequency of short answer essay exams drops, and writing is typically replaced by personal narratives, analytical papers and research papers. Literature reviews are still infrequent, and the number of any given type of writing assignment is generally limited to one or two a semester. So while the faculty sees the value in writing assignments, their implementation of this vision is limited. Class size is the most common reason given by faculty for limiting writing assignments.

#### Indicators of Student Writing Performance

A second assessment attempted to determine whether writing success can be predicted based on student ACT/SAT verbal scores, overall grade point average, and/or on the prerequisite courses taken (Spagna, 1997). Student success was measured in two ways: (1) student scores on all writing assignments taken during Semesters A and B in 1996 (two different cohorts equaling 59 students) were tallied; and (2) a specific assignment (a two to three page essay) assigned in Semester B during 1996 and 1997 (totaling 43 students) was scored by two readers (Spagna and Shearin) using the rubric that is provided in Appendix A (absent the content section). We were specifically interested in knowing whether students who had taken the new second-semester composition course (English 205, Writers' Workshop) rated higher than students who had taken the previous prerequisite course (English 302, Technical Writing).

Spagna (1997) analyzed whether the prerequisite courses had any positive effect on student writing abilities based on their scores on an essay assignment. The mean writing score for this essay was 9.38 out of a possible total of 15 points, a less than stellar performance on the part of most students. For those who had taken English 205 (the new prerequisite), the mean score was 10.12. For those who had taken English 302 (the previous prerequisite), the mean score was 8.90, while the mean score for students who had not taken all their prerequisite composition courses was also 8.90. While it is apparent that students, on average, who had taken English 205 performed better on this writing assignment (means of 10.12 compared to 8.90 for the other two groups), Spagna (1997) found through an ANOVA test that there was no statistically significant difference. She obtained a similar result when students' performance on a broad range of writing assignments in Semesters A and B were examined. Students in Semester A (1996) who had taken English 205 had a mean score of 84% compared to 81% for students who had not taken it. Similarly, in Semester B (1996), students who had taken English 205 had a mean score of 83% compared to 77% for those who had not taken it (Spagna, 1997). So while English 205 apparently results in higher scores on writing assignments, as yet there is no statistical support for this hypothesis. It appears that—based on a limited sample of both writing and students—there is no strong correlation between a students' general preparatory work, attitude, and overall academic performance with their writing ability.

## DISCUSSION AND CONCLUSIONS

The School of Forestry at Northern Arizona University has made substantial progress over the last three years to address the writing needs of its students. The emphasis placed on writing in specific courses has lead to an increased awareness on the part of students that writing is, and will be, an important part of their professional lives. Faculty, as determined through the survey and by their participation in writing seminars, are also aware and excited about the importance of writing in the University and the professional program. Specifically, faculty feel that writing should model the types of tasks that professionals will be required to do, writing should encourage critical thinking, and finally, writing tasks should be assigned—and designed—to improve writing skills. But to accomplish these objectives requires a revision in the types of writing most often assigned to Forestry undergraduates: short answer exam responses and descriptive laboratory reports. Forestry professionals are required to ascertain the nature of a problem, determine what previous knowledge exists to assist in their analysis, and then synthesize this in a manner that informs and justifies their decisions. The types of writing assignments that do this are literature reviews, comparative essays, and analytical papers. But the processes and exercises used to develop these skills, and specifically these types of writing, according to the Forestry faculty survey are not frequently assigned.

The challenge for writing across the curriculum then becomes how to induce professors to actively incorporate writing into their courses, and students to actively work to improve their skills. The work done for this project has shown that there are a number of techniques that have potential to translate writing awareness into writing actions. First, and perhaps foremost, more writing needs to be assigned in lower division courses. To do this, (1) the size of the sections for these courses must be reduced so that the grading burden is manageable, and (2) the types of writing can be mirrored to those covered in English prerequisites and students advised (or required) to co-register for these classes. In this way, there would exist a feedback and reinforcement between the skills building learned in the composition classes and the content- and conceptual-based knowledge that can occur in Forestry lower division courses.

There are a number of strategies to reduce the grading burden on faculty. First, there are many activities that involve writing that do not incur large grading requirements. Journals kept by students to record their reflections on assigned readings and develop themes for papers are a comparatively efficient way to provide students with feedback. They can replace quizzes or short answer exam questions with little additional effort, and they have the benefit of counteracting student strategies to just memorize answers. In-class writing exercises that respond to prompts based on readings or class topics can be immediately discussed. If scoring is needed, they can be handed in and easily graded on a "plus, check, minus" system. Finally, we have seen the benefit in devising a grading "rubric" to make our criterion both clearer to students and quicker on faculty to assess.

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<sup>1</sup>The discussion of the assessment of student and faculty attitudes towards writing was based on a study conducted for the School by Spagna (1997), and the grading rubric by Shearing, Spagna and Jamieson (1997). Their assistance is gratefully appreciated, however all conclusions based on their work are the author's.

<sup>2</sup>My interpretation of the responses to the attitudinal questions differs from Spagna's (1997). Spagna believes that the questions cannot stand independently, but instead can be considered only as interdependent pieces of an overall attitudinal scale. I, on the other hand, think that there is useful information contained in responses to specific questions.

## APPENDIX A

### GRADING RUBRIC FOR WRITING EVALUATION (Shearin et al., 1997)

Use: This rubric has four categories: content, logical development, mechanical style, and grammar. Depending upon the type of assignment and the level of the course, the four categories may be weighted differently. The content area for each course, or possibly even assignment, should be specific to the expectations of the faculty member.

#### CONTENT

Content area instructors should define criteria for this area using a 5 - 1 scale.

#### LOGICAL DEVELOPMENT

- A 5 in this category has a thesis, presented near the start of the paper, that adequately reflects the assignment. Each paragraph has one major idea. All main ideas are relatable to the thesis. All main ideas are supported by well-explained and in-depth examples or evidence. Connections between paragraphs are clear. The situation is introduced, and terms defined where necessary.

- A 4 is generally well-developed but could be better.
- A 3 is readable but inconsistently organized and/or underdeveloped.
- A 2 has development problems that obscure meaning.
- A 1 has no evidence of the features of the 5 score of this category.

#### MECHANICAL STYLE

- A 5 in this category exhibits a clear awareness of audience. It uses appropriate vocabulary, sentence structure, and punctuation. Spelling is correct. Language is clear and concise. Where appropriate, sources, tables figures, and maps are used clearly and accurately.
- A 4 has generally good mechanical style, but it could be better.
- A 3 is readable but exhibits an inconsistent awareness of audience. Contains some inappropriate use of the features of this category.
- A 2 has such inappropriate use of features of this category that either author seems completely unaware of audience or meaning is obscured.
- A 1 has no evidence of the features of the 5 score of this category.

#### GRAMMAR

- A 5 in this category demonstrates consistently correct subject/verb agreement. It also has correct sentence structure and word choice, consistency in person, tense, and number, and clear pronoun references.
- A 4 has generally good grammar, but it could be better.
- A 3 is readable, but it has noticeable grammatical errors.
- A 2 has grammatical problems that make meaning difficult to decipher.
- A 1 has no evidence of the features of the 5 score of this category.